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 TI - New 4-alkyl-gamma- ---lactone--- derivatives that ---stimulate---
 ---plant--- growth and defense and have antifungal activity against
 pathogenic fungi.
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 LO - Fr.
 PI - FR 2780972 A1 20000114
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 DT - Patent
 LA - French
 OS - WPI: 2000-173814
 FA - AB; LA; CT; MPC
 AB - The 4-alkyl- gamma-lactones of formula (I) are claimed as new compounds
 which can be used to ---stimulate--- ---plant--- growth and
 defense, especially by stimulating peroxidase (EC-1.11.1.7)
 biosynthesis,
 and have antifungal activity against various pathogenic fungi.
 Synthesis
 of compounds (I), such as 4-tetradecyl butyrolactone, was outlined; PMR
 and MS data were presented. In antifungal bioassays, compounds (I),
 such
 as gamma-decalactone (decanolactone gamma), at dosages of 0.1-1.0 kg/ha
 applied in the irrigation water or as an aerial spray, showed good
 curative activity (up to 100% control) against Fusarium oxysporum and
 Botrytis cinerea on tomato and vines, resp; the lactone acts directly
 against Botrytis germination. The lactones are also claimed to be
 active
 against Trichoderma sp., e.g. T. harzianum.

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